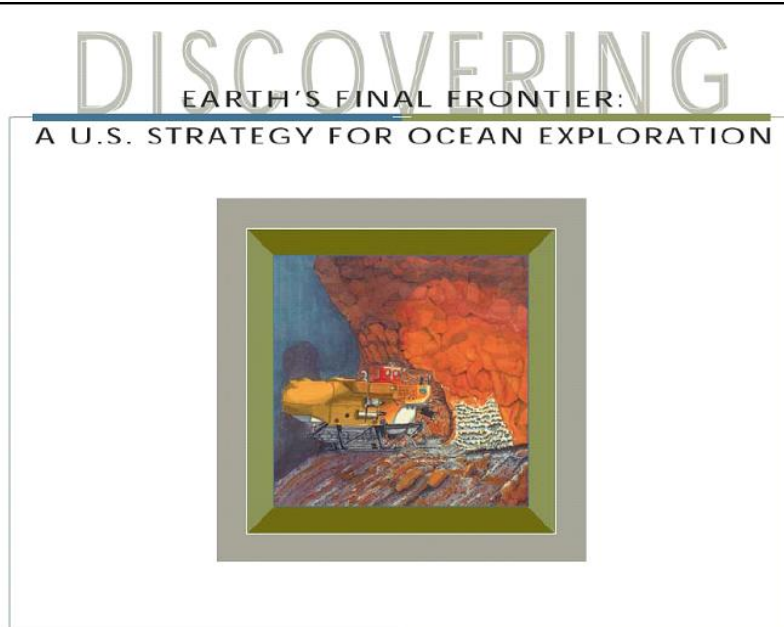


Ocean Exploration's 2nd Decade

Draft Decadal Independent Review of the USG Ocean Exploration Program Invited by NOAA Science Advisory Board



The Report of the President's Panel for Ocean Exploration

Year 2000 report initiating
National program on ocean exploration

Joint USA-Indonesia ocean
exploration team in front of
RV Okeanos Explorer, 2010

7/12/2012



Summary

Finding:

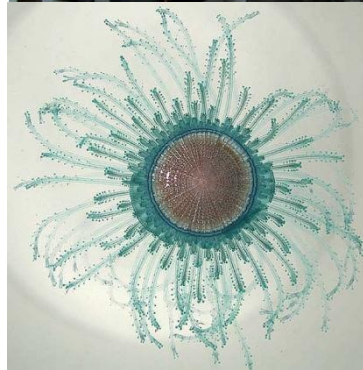
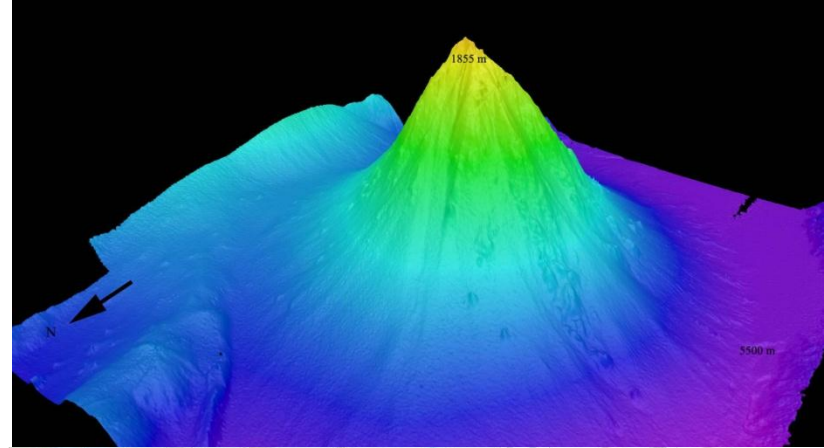
Undiminished motivations for OE

Recommendations:

- 1 Set Strategic Goals & Priorities
- 2 Affirm NOAA Leadership Support
- 3 Create & Operate National Forum
- 4 Consider New Management Models
- 5 Resume Higher Level of Targeted Expeditions
- 6 Consider Alternatives to *Okeanos Explorer*
- 7 Update Technology Strategy
- 8 Speed Completion of Extended Continental Shelf Mapping
- 9 Improve Branding
- 10 Implement OE Advisory Board

7/12/2012

Draft



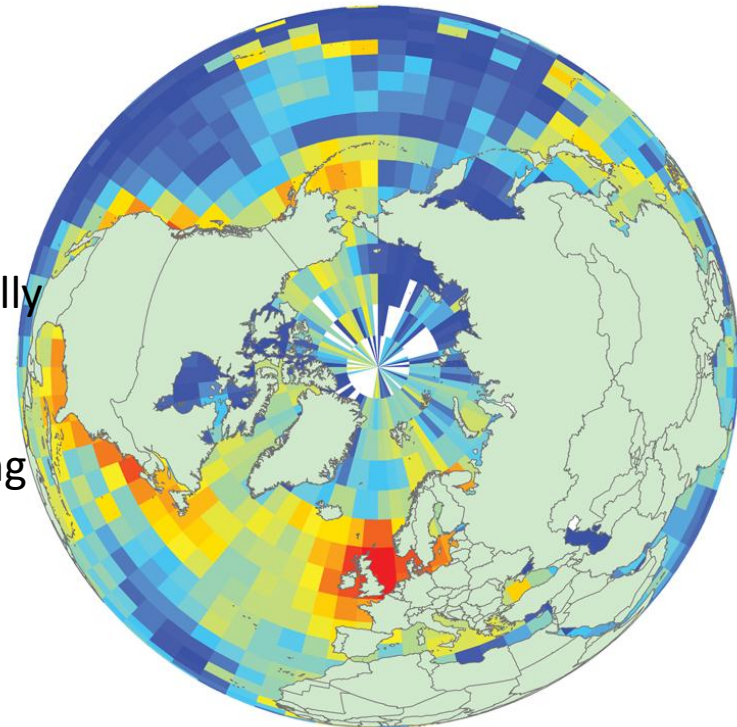
Finding: Undiminished motivations

- Successes: In science, mapping, data management, education, politics and diplomacy
- Unfinished: Vast unexplored regions, US ECS & EEZ
- Part of American greatness and spirit



Left: Benjamin Franklin's map of Gulf Stream

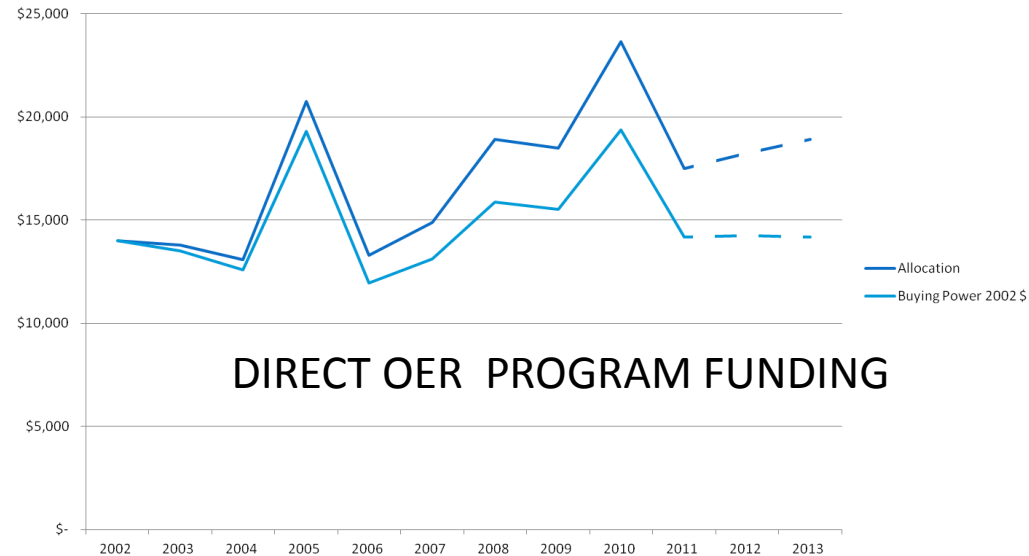
Right: Taxonomically reliable map of observations of marine life showing unexplored Arctic (red means many records, blue few, white none.



1 Set Strategic Goals & Priorities

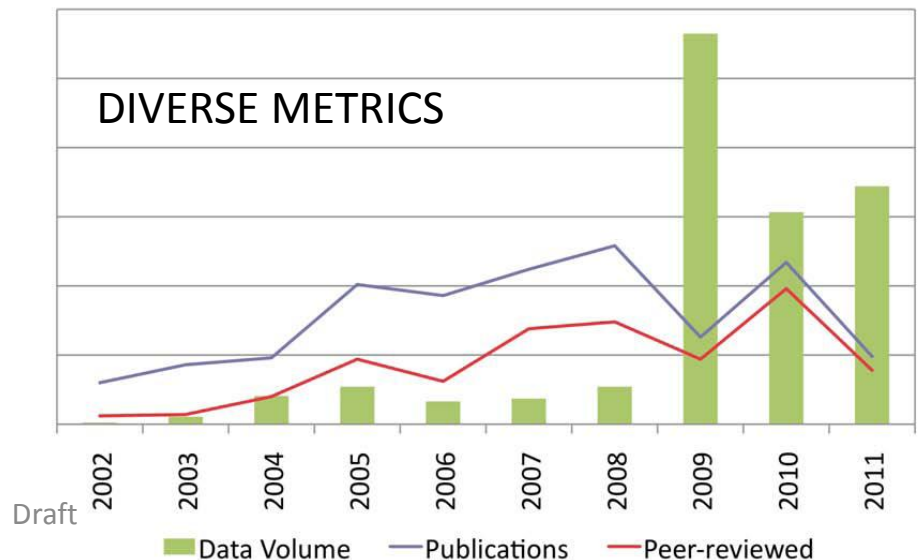
- Set processes, in order to
 - Define program boundaries and set measurable goals and priorities
- mindful of particular risks of exploration (accept risk, unpredictability)

NOAA Ocean Exploration Program - Allocation vs. Inflation



DIRECT OER PROGRAM FUNDING

DIVERSE METRICS



2 NOAA Leadership Support

- Top NOAA leadership must publicly and repeatedly articulate the importance of ocean exploration to the nation and to NOAA's own mission



3 National Forum

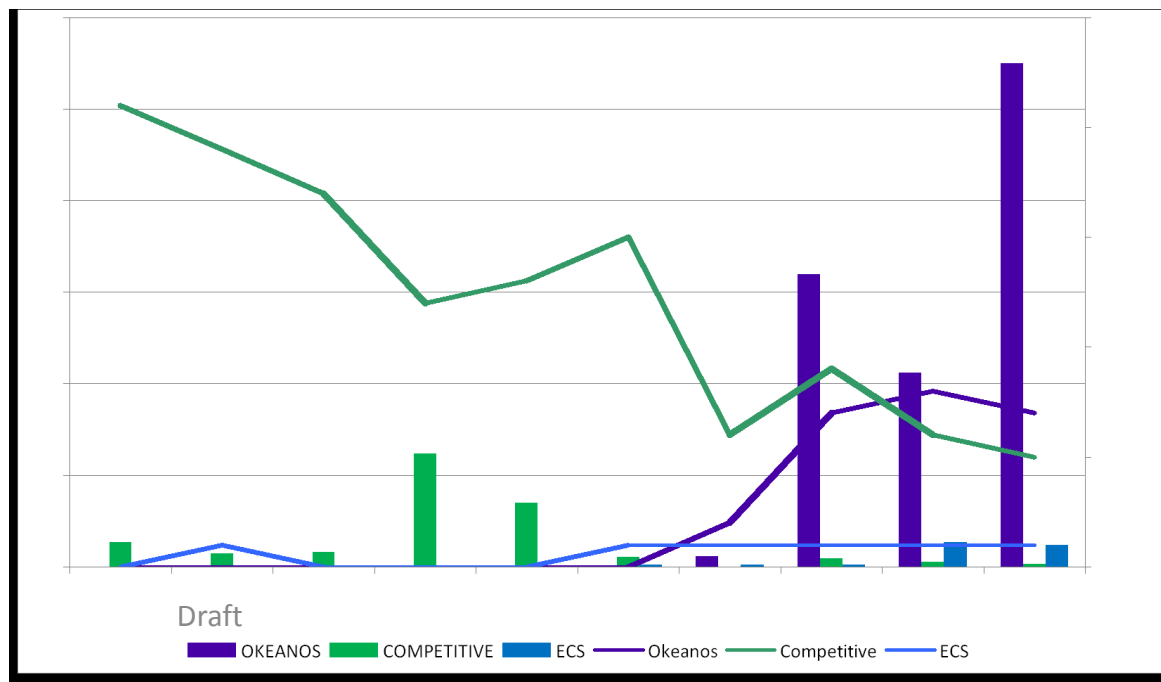
- Per PL 111-11 establish and enable annual high-level National Forum across sectors to encourage partnerships, investments, technology development, expeditions
 - engage federal & state agencies, non-profits, private foundations, for-profit companies
 - initiate domestically, then perhaps broaden
 - consider related service functions such as help with permitting, clearing house



4 Consider Radical New Management Models

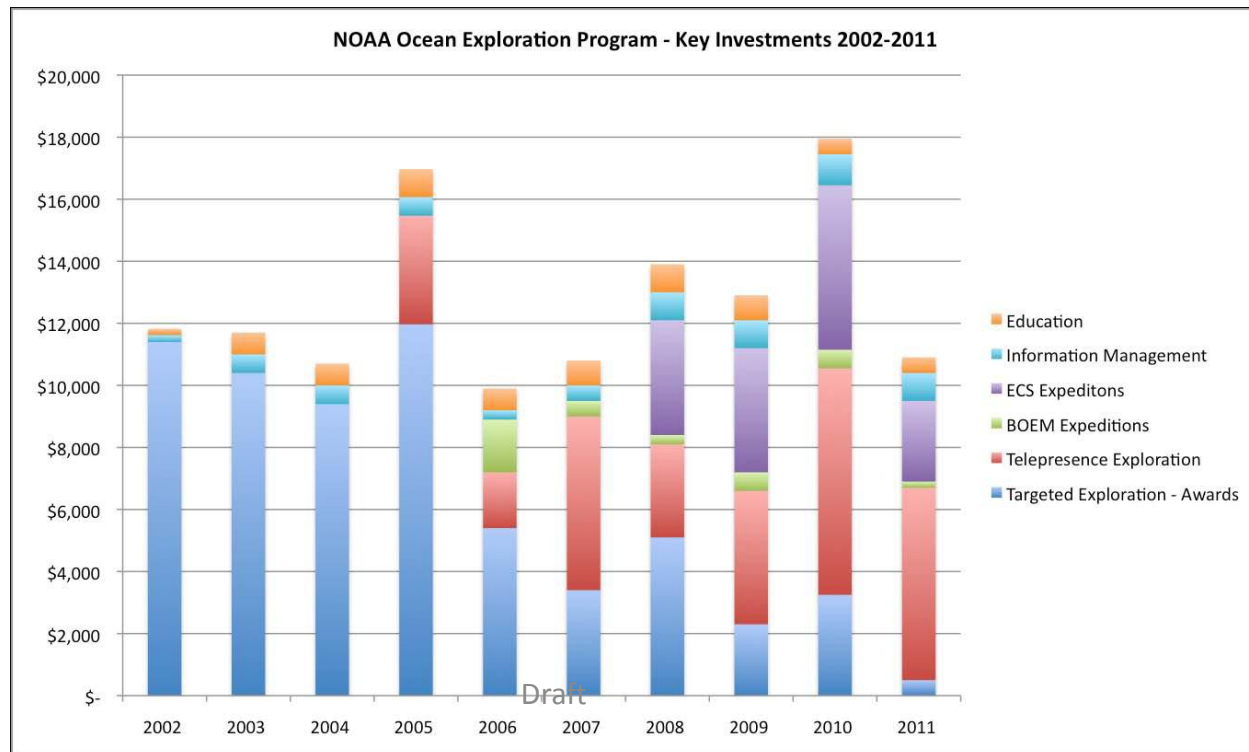
- Carefully evaluate administrative overhead, business processes (in both OE and relevant parts of NOAA)
- Improve transparency of expenditures and commitments
- Credibly value partnerships
- Consider Cooperative Institute model (competitive)
- Explore multi-year funding strategies
- Consider crowd-sourcing, prizes, medals
- Check consistency of models with Congressional interest

7/12/2012



5 Targeted Expeditions

- Return to program with minimum of \$10m every year in targeted expeditions (extramural)
- Targets derived from Strategic Plan (can be geographic, thematic, and/or phenomenological, e.g., Arctic, EEZ)



6 Okeanos Explorer

- Consider diverting all OE funds for targeted exploration charter
- Confirm OE real continuing annual and daily costs (2800k/yr + 5000k/yr? ~ \$8m?)

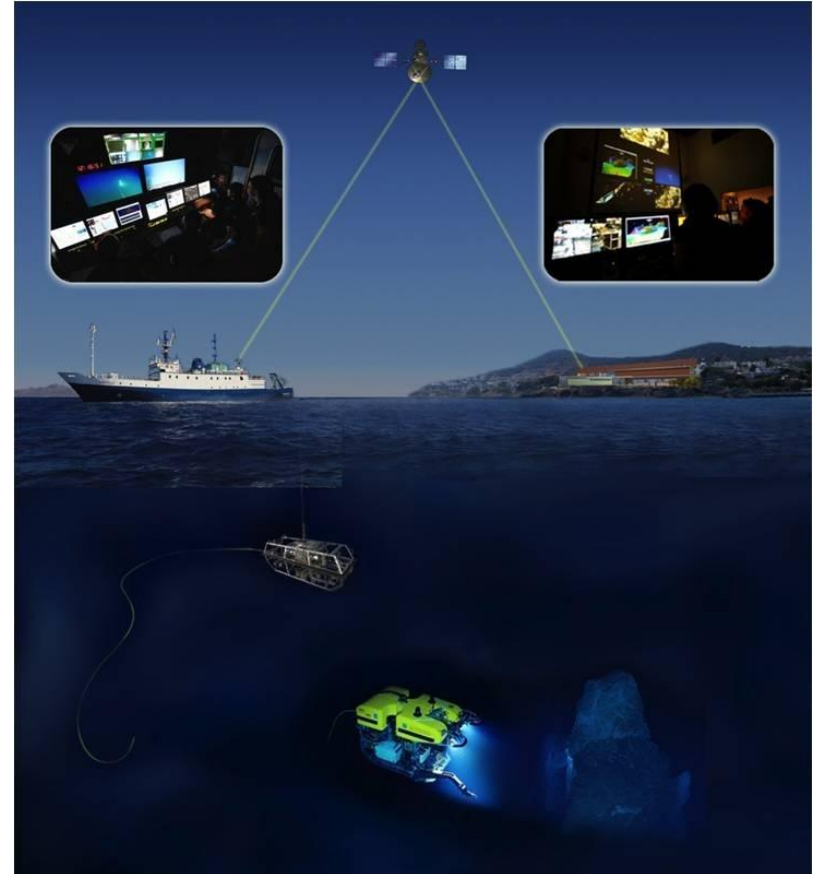


Draft



7 Technology issues

- Sensors, exploration instruments and vehicles, and information technology (hardware and software) – too costly for NOAA/OER alone to lead
- Telepresence – have pioneered but context changing fast, need to stay abreast

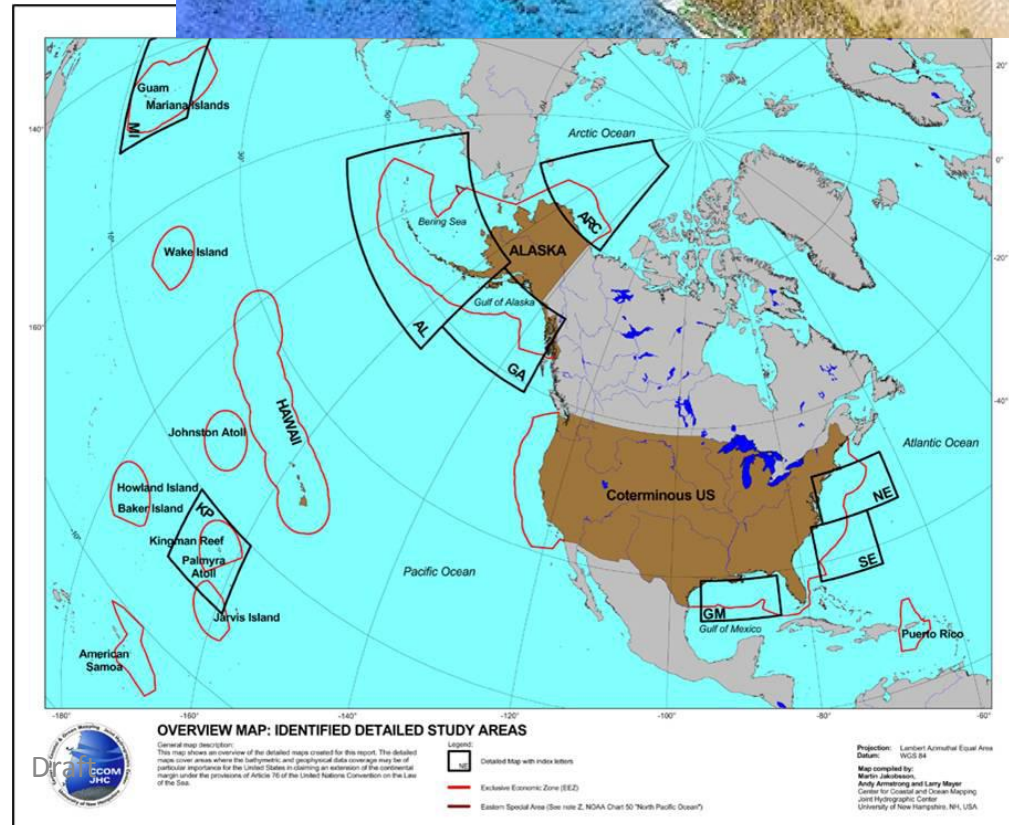


Area north of Alaska surveyed by
NOAA and UNH researchers during
expeditions in 2003, 2004 and 2007



8 Extended Continental Shelf

- Outstanding, political demand
- Accelerate to finish OER share in ~3 years



James Cameron ready for
Mariana Trench dive

9 Branding

- Develop Icons
- Cultivate Champions



The Washington Post



washingtonpost.com > Technology > Wires

Deep-sea images reveal colorful life off Indonesia

By ROBIN McDOWELL
The Associated Press
Thursday, August 26, 2010; 12:53 PM

JAKARTA, Indonesia -- Scientists using cutting-edge technology to explore waters off Indonesia were wowed by colorful and diverse images of marine life on the ocean floor - including plate-sized sea spiders and flower-like sponges that appear to be carnivorous.

They predicted Thursday that as



ocean explorer

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Follow scientists as they investigate deep-sea habitats and marine life in the northern Gulf of Mexico. Join the team online as they make discoveries deep below the ocean surface.

EDUCATION | EXPLORATIONS | SPECIAL FEATURES

Gulf of Mexico 2012

(February - April) Follow a team of scientists both on board the NOAA Ship Okeanos Explorer and on shore as they explore the diversity and distribution of deep-sea habitats and marine life in the northern Gulf of Mexico.

[LIVE streams from the Okeanos Explorer](#)

INSPIRE: Chile Margin 2012

(April) During a 10-day cruise on the R/V Melville, scientists probe for strange new biological life forms, communities, and ecosystems dependent on as-yet-unknown conditions.

Educational Materials

[Professional Development](#)

Dive into lesson plans, professional development opportunities, and ocean career profiles.

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[Podcasts RSS](#)

[YouTube](#)

[Flickr "Aliens From The Deep"](#)

[Okeanos Explorer](#)
"America's Ship for Ocean

10 OE Advisory Board

- Coordinate with SAB to multiply influence, achieve efficiencies
- Avoid conflicts of interest
- Assist program in development of 5-year strategic plan and monitor progress

Thanks!

Decadal review panel meeting
7-8 May 2012, Silver Spring MD

7/12/2012

